

### **REMARKS**

In response to the Final Office Action mailed March 24, 2009, the new assignee of this application (i.e., Nuance Communications Inc.) respectfully requests reconsideration. To further the prosecution of this application, amendments have been made to the claims, and each of the rejections set forth in the Office Action has been carefully considered. The claims as presented are believed to be in condition for allowance.

Claims 1, 4-5, 7-11, 14-15, 17-23, and 29-35 are pending in the present application. Currently claims 1, 4-5, 7-11, 14-15, and 17-23, stand rejected under 35 U.S.C § 103(a) as being unpatentable over U.S. Patent No. 6,081,780 ("Lumelsky") in view of Applicant's admitted prior art ("AAPA"). Claims 29-32 stand rejected under 35 U.S.C § 103(a) as being unpatentable over Lumelsky in view of AAPA and further in view of Saon, et. al., "Maximum Likelihood Discriminant Feature Spaces," 2000, IEEE International Conference on Acoustics, Speech and Signal Processing, Volume 2, 5-9 June 2000, pages 1129-32 ("Saon"). Assignee has amended claims 1, 7-8, 10-11, 14, 17-18, 21-23, 29, and 31, and has added new claims 33-35. No new matter has been added.

The Assignee respectfully disagrees with the present rejections and traverses as follows.

Lumelsky has been described in responses filed on May 30, 2008 and December 19, 2008. For purposes of efficiency, the Assignee does not repeat such descriptions herein.

The Examiner recognizes that "Lumelsky does not specifically teach an alignment process for aligning the spoken utterance with a corresponding text string." (3/24/2009 Office Action at 3.) Nevertheless, the Examiner asserts that "aligning a spoken utterance with a corresponding text string was well known in the art," and concludes that "It would have been obvious to one of ordinary skill in the art to implement alignment processing in the system of Lumelsky." (3/24/09 Office Action at 3.) The Assignee respectfully disagrees.

That ways of performing alignment may have been known in the prior art does not provide any motivation for implementing alignment processing in the system of Lumelsky. Indeed, there would have been no motivation to perform such an alignment process in Lumelsky.

One aspect of Lumelsky is directed to training the system and compares two different audio signals in an iterative process to create a synthetic audio representation of information that resembles a spoken audio version of that information. (Lumelsky, col., 5, ll. 38-67; col. 14, ll. 25-27.) The purpose for this iterative processing in Lumelsky is to use this audio comparison process to "more closely represent the spoken version of the information provided by the narrator," and thereby train the system to generate more realistic sounding synthetic speech. (Lumelsky, col. 14, ll. 23-25.) Although the synthetic audio representation of the information may originate from text, there is no motivation in Lumelsky to align a spoken audio signal with text corresponding to the audio signal. The system of Lumelsky simply has no need to align a spoken audio signal with text, as the text is only used to generate a first iteration of synthesized speech. Thereafter, Lumelsky is directed to comparing only audio versions of the information and the text is not used once the first pass of the synthetic voice has been created. Lumelsky's processing is directed to iteratively comparing audio signals and would have been no reason to align the spoken audio signal with text.

Once Lumelsky has performed its phonetic processing to train the systems to generate a particular type of voice (e.g., gender, accent) the output of such training processing is sent to a user terminal where it can be used to generate realistic sounding synthetic speech when the corresponding voice type (e.g., gender, accent) is selected. When synthesized audio signals are created at the user terminal, as the purpose of the operation at the user terminal is to create an audio version of the text using the synthesizer. There is processing performed at will which compares the text with any audio signal. Accordingly, there would also be no need to align text with a spoken audio signal in this aspect of the Lumelsky system.

As should be appreciated from the foregoing, there would have been no reason at all to align text with a spoken audio signal in Lumelsky, as such alignment would have no operative use in the system of Lumelsky.

Claims 1, 11, and 21 require aligning a text string with a spoken audio signal. Performing the alignment of the claims is not taught, disclosed, or suggested by Lumelsky. While the AAPA may discuss methods of performing alignment, there is absolutely no reason this is done by marking up newly generated text with characteristics from the corresponding type of voice (e.g., gender, accent, etc.) selected to align a text string with a spoken audio signal in Lumelsky. Thus, the combination of Lumelsky and AAPA is improper, and the prior art does not teach or suggest all limitations of independent claims 1, 11, and 21. Thus, those claims are patentable over Lumelsky and AAPA for at least the reasons discussed above.

The Examiner cites Saon, et al. as disclosing the subject matter recited in claims 29-32. However, Saon further does not teach or suggest aligning a text string with an audio signal, and thus does not remedy the deficiencies of Lumelsky and the AAPA discussed above. As claims 4-5, 7-10, 14-15, 17-20, 22-23, and 29-35 all depend from either claims 1, 11, or 21, they are thus patentable for at least the same reasons as claims 1, 11 and 21 discussed above. Thus, the rejection of each of the dependent claims should similarly be withdrawn. Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Assignee believes that it is unnecessary at this time to argue the further distinguishing features of the dependent claims. However, Assignee does not necessarily concur with the interpretation of the dependent claims set forth in the Office Action, nor does Assignee concede that the prior art alleged to show the features in the dependent claims does so. Therefore, Assignee reserves the right to specifically address the further patentability of the dependent claims in the future. Reconsideration and withdrawal of the rejections against these claims are respectfully requested.

**CONCLUSION**

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Assignee hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825 under Docket No. N0484.70760US00 from which the undersigned is authorized to draw.

Dated: May 26, 2009

Respectfully submitted,

Nuance Communications, Inc.

By 

Richard F. Giunta, Reg. No. 36,149  
Ilan N. Barzilay, Reg. No. 46,540  
WOLF, GREENFIELD & SACKS, P.C.  
Federal Reserve Plaza  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2206  
617.646.8000